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Electrically induced neuroplasticity

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Propositions

- While ECT has a negative short-term impact on cognition, on the long-term these effects will, on average, subside.
- Disentangling the epiphenomenal effects of ECT from those that are required to establish the antidepressant response is a necessary next step in depression research.
- Understanding the mechanism of ECT enables the development of better tolerable therapies with similar high efficacy.
- Results show that electroconvulsive therapy stimulates plasticity in the brain.
- Future work should focus on elucidating the timeline of volume increases, diffusivity changes, mood improvements and cognitive/memory impairment to assess causality in the effects of ECT.
- Neurogenic effects of ECT appear to be limited to the dentate gyrus of the hippocampus.